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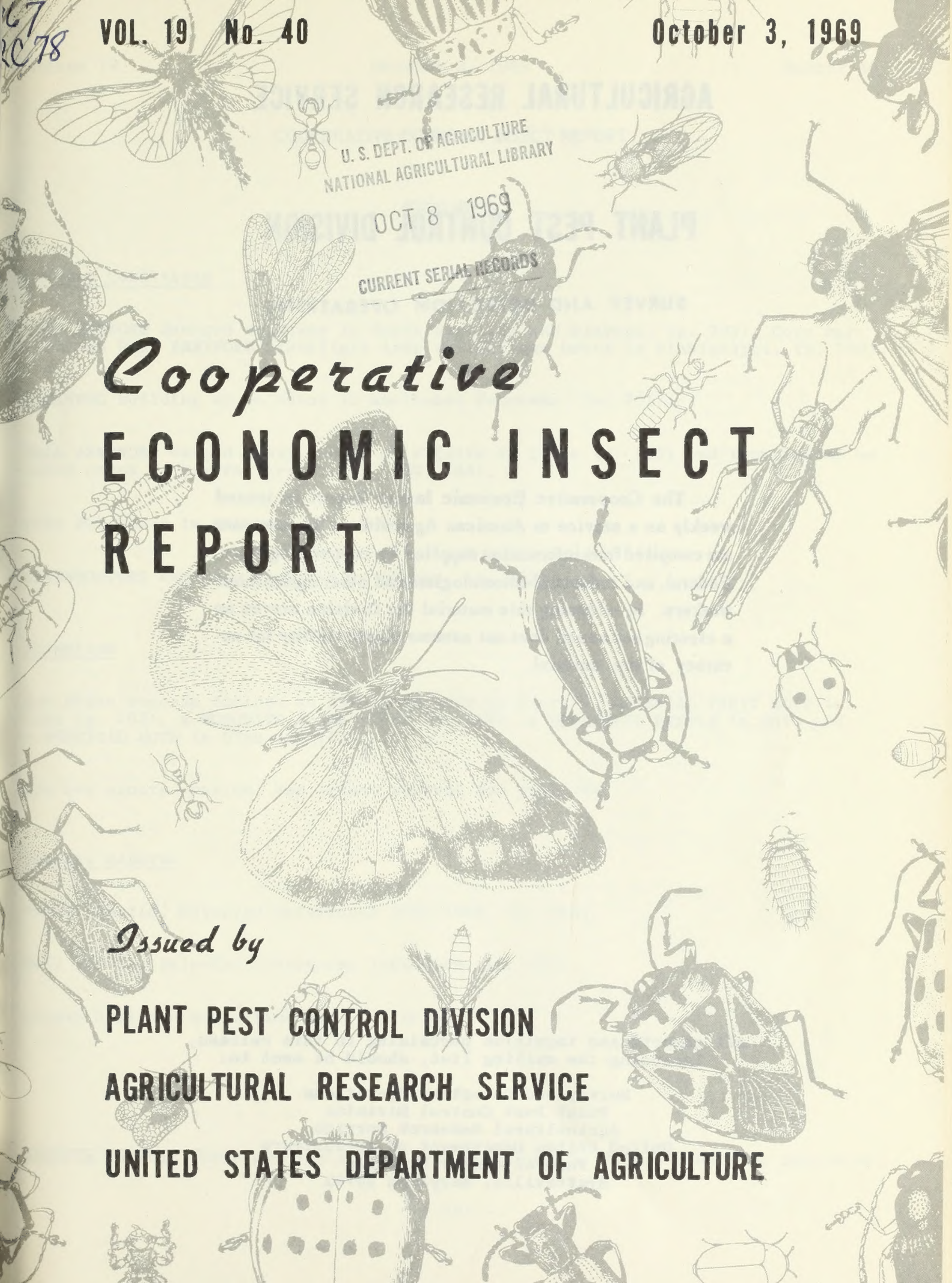

Cooperative
ECONOMIC INSECT REPORT

Issued by

PLANT PEST CONTROL DIVISION
AGRICULTURAL RESEARCH SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

SURVEY AND DETECTION OPERATIONS

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

All reports and inquiries pertaining to this release, including the mailing list, should be sent to:

Survey and Detection Operations
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Federal Center Building
Hyattsville, Maryland 20782

Volume 19 October 3, 1969 Number 40

COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Current Conditions

CORN EARWORM damaged soybeans in South Carolina and Alabama. (p. 761). Corn earworm and BEET ARMYWORM blacklight trap collections heavy in Mississippi. (p. 769).

GREENBUG building up on wheat in southeast Nebraska. (p. 761).

FALL ARMYWORM caused heavy damage on alfalfa in Texas (p. 763) and troublesome on other crops in several areas. (pp. 762, 764).

HORN FLY heavy in Oklahoma. (p. 766).

GRASSHOPPERS damaging conifers in Oregon. (p. 767).

Detection

New State records include an AMPULICID WASP in Florida, ORIENTAL FRUIT MOTH in Utah (p. 765), a MOSQUITO in Maryland (p. 766), a DERMESTID BEETLE in Ohio and a PHYCITID MOTH in Utah (p. 767).

For new county, parish, and island records see page 764.

Special Reports

Khapra Beetle. Selected References 1967-1969. (p. 770).

Boll Weevil. Selected References 1968-1969. (p. 771).

Golden Nematode Quarantine Map. Centerfold.

Reports in this issue are for week ending September 26 unless otherwise indicated.

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Golden Nematode Quarantine Map. Centerfold

WEATHER OF THE WEEK ENDING SEPTEMBER 29

HIGHLIGHTS: Summer lingered in the western half of the Nation as autumn advanced over the East. In some eastern areas this was the third week of typical autumn weather. Frontal thundershowers dotted much of the East.

TEMPERATURE: A series of fronts crossed the northern half of the country during the week, each followed by a surge of cool, fresh, dry air. Subfreezing temperatures occurred in the higher valleys in the Rocky Mountains on a few mornings and Spencer, Iowa, registered 32° on Wednesday morning. More uniform temperatures prevailed over the southern portions of the United States with afternoon maximums mostly in the 80's and early morning minimums mostly in the 60's. The Southwest continued hot. The temperatures at desert locations ranged from the high 90's to a few degrees above 100° on most afternoons. Weekly temperatures averaged above normal from the Pacific Ocean to the western Great Plains and along the gulf coast and below normal over the rest of the Nation. Parts of the Great Basin averaged 3° to 7° below normal. A large area from the Great Lakes to central Alabama averaged 3° to 6° below normal.

PRECIPITATION: Low-lying areas, many secondary roads, and a few main arteries in northwestern Florida became flooded following the torrential weekend rains in the panhandle. Storm totals at Quincy and Litman were 18.41 and 21.5 inches, respectively. Showers and thunderstorms covered much of the eastern third of the Nation on Tuesday in the warm humid air in advance of a cold front that stretched from the Great Lakes to the southern Great Plains. As this front moved to the Atlantic Ocean, other fronts crossed the northern Great Plains bringing clouds and mostly light to moderate showers. On Friday evening, however, a disturbance brought torrential showers to north-central and northeastern Kansas producing local flash floods along some of the streams. The Southern States remained mostly cloudless and free from rain during the latter half of the week, except Florida which received torrential thundershowers Sunday afternoon and evening. Pacific storms brought light rains to the Far Northwest -- up to 4 inches along the Washington coast and lesser amounts inland and farther south along the coast. Most of the area from California to the central southern Great Plains received no rain or only light sprinkles. Rainfall over the eastern half of the United States ranged widely from light sprinkles to 2 to 4 inches due to the spotty showers. Alabama received only light sprinkles. (Summary supplied by Environmental Data Service, ESSA.)

SPECIAL INSECTS OF REGIONAL SIGNIFICANCE

CORN EARWORM (Heliothis zea) - NEW JERSEY - Larvae moderate in broccoli near Centerton, Salem County. (Ins.-Dis. Newsltr.). DELAWARE - Infestations ranged 50-90 percent in untreated sweet peppers in Sussex County. (Burbutis, Kelsey). OHIO - Generally light, 0-15 percent, on ears of field corn in northeastern area. Infested 40 percent of ears in southern Carroll County. (Richter). VIRGINIA - Remains locally severe and damaging on soybeans in Gloucester County. (Kinder). Larvae destroyed 7 acres of late-planted soybeans in Nottoway County. Determined by W.A. Allen. (Cassell, Sept. 19). SOUTH CAROLINA - Greatest soybean damage of last 10 years in Laurens County. (Outz, Nettles, Sept. 24). Main problem on fall snap beans. (Thomas, Sept. 24). ALABAMA - Larvae damaging on several thousand acres of soybeans throughout State. More widespread and heavier than in many years and may be most severe on record. Damaging in Barbour, Covington, Conecuh, Dallas, Autauga, Tuscaloosa, Hale, Cherokee, Shelby, and Madison Counties. (Walton et al.). KANSAS - Larvae in sorghum heads ranged 1 per 25 heads to 1 per 3 heads in Riley, Wabaunsee, Anderson, Linn, Allen, Neosho, Crawford, and Bourbon Counties, and 3 per 10 heads to 3 per head in Saline, Ellsworth, Rice, and Barton Counties. Up to 3 full-grown larvae per head in 95 percent of heads in one Ellsworth County field. (Simpson). TEXAS - Larvae medium on peanuts near Flomot, Motley County, with 10-20 percent leaf damage. (Green). Locally heavy on grain sorghum in field near Whiteflat, Motley County. Up to 30 percent of plants infested, averaged 1-3 larvae per plant; feeding on grain in dough stage. (Pallmeyer).

CORN LEAF APHID (Rhopalosiphum maidis) - NEBRASKA - Alates 10-15 per row foot in 11 wheatfields in Saunders, Gage, Jefferson, Lancaster, and Saline Counties. (Andersen, Lipsey). KANSAS - Light to moderate, ranged 25-500 per 10 plants, in most late sorghum examined in east-central, southeast, and central areas. Mostly behind leaf sheath, occasionally found in head. (Simpson). OKLAHOMA - Ranged 60-75 per plant in 8-inch sorghum in Cotton County. (Okla. Coop. Sur.).

GREENBUG (Schizaphis graminum) - SOUTH DAKOTA - Heavy on volunteer wheat north of Quinn, eastern Pennington County, week ending September 20. (Jones, Parsons). NEBRASKA - Building up, ranged 6-15 per square yard, in 11 wheatfields in Saunders, Gage, Jefferson, Lancaster, and Saline Counties. Destroyed about 30 percent of rye field in Washington County; controls applied. (Keith). OKLAHOMA - Light to moderate in many volunteer wheatfields in southwest and west-central areas. Averaged 200 per plant inside sheath of headed sorghum in Ellis County. (Okla. Coop. Sur.).

POTATO PSYLLID (Paratrioza cockerelli) - CALIFORNIA - Medium locally on tomato plants in Fremont, Alameda County. (Cal. Coop. Rpt.).

SPOTTED ALFALFA APHID (Therioaphis maculata) - KANSAS - Light, ranged 8-50 per 10 sweeps, of alfalfa in most fields in east-central, southeast, and central areas. One field in Neosho County ranged up to 125 aphids per 10 sweeps. (Simpson). OKLAHOMA - Heavy in alfalfa in Greer County. (Okla. Coop. Sur.).

TOBACCO BUDWORM (Heliothis virescens) - CALIFORNIA - Eggs and larvae medium on red bottle-bush in Ojai, Ventura County. (Cal. Coop. Rpt.). ARKANSAS - First record on corn in State. Collected from sweet corn in mid-June at McCaskell, Hempstead County, by M. Wall. Determined by M. Wall; confirmed by Rouse, Phillips, and Boyer. (Boyer).

CORN, SORGHUM, SUGARCANE

EUROPEAN CORN BORER (Ostrinia nubilalis) - DELAWARE - Infestations range 50-90 percent in untreated sweet peppers in Sussex County. (Burbutis, Kelsey). OHIO - Larval infestations averaged 30 percent of ears and 10-20 percent of stalks in central and east-central areas. In 75 percent of ears and 98 percent of stalks in southern Tuscarawas County field. About halfway down center of ear in most cases. (Richter). VIRGINIA - Locally severe in some areas of Charlotte County. Cornstalks rotting and lodging. (Richardson, Sept. 10). SOUTH CAROLINA - Light corn damage in Oconee and Berkeley Counties. (Thomas, Sept. 24). KANSAS - Infested all sorghum fields examined in Wabaunsee, Anderson, Linn, Allen, and Neosho Counties. Percent stalks infested by county: Up to 3 in Neosho, 40 in Allen, 4 in Anderson, 6 in Linn, 15 in Wabaunsee. Larvae mostly in upper third of stalk and in many cases tunneled into head. Some stalks broken. (Simpson).

SOUTHWESTERN CORN BORER (Diatraea grandiosella) - ILLINOIS - Average infestation of 48 percent in Pulaski and Alexander County cornfields. Slightly more than 20 percent of stalks infested in 1968; averaged 1.2 percent in Massac County. Farthest northerly point of infestation at Sesser, Franklin County. This is a new county record. (Ill. Ins. Rpt.).

FALL ARMYWORM (Spodoptera frugiperda) - WISCONSIN - Larvae remain numerous in late sweet corn in east-central counties. (Wis. Ins. Sur.). OKLAHOMA - Still on sorghum in western two-thirds of State. Larvae ranged 1-3 per head in grain sorghum and 1-7 per plant in forage sorghum in Ellis County and 0-8 per head in Beaver and Texas Counties. (Okla. Coop. Sur.). TEXAS - Destroyed 75 percent of leaves on 10 percent of sorghum plants in field near Whiteflat, Motley County. Forage sorghum in same field completely destroyed. (Boring, Pallmeyer).

SORGHUM WEBWORM (Celama sorghiella) - KANSAS - Mostly late sorghum examined in Anderson, Linn, Allen, and Neosho Counties had 3-18 percent of heads infested with 2-6 larvae per infested head. One field in Neosho County 80 percent infested with up to 12 larvae per infested head. (Simpson).

WESTERN BEAN CUTWORM (Loxagrotis albicosta) - COLORADO - Larvae ranged 0-4 per 50 row feet in Phillips County corn. (Johnson).

WESTERN CORN ROOTWORM (Diabrotica virgifera) - SOUTH DAKOTA - Ranged 5-25 per plant in late-planted cornfield near Trent, Moody County. (Jones).

SMALL GRAINS

FALL ARMYWORM (Spodoptera frugiperda) - OKLAHOMA - Larvae ranged 2-35 per square foot on small grain in Ellis County. Continues moderate to heavy in northwest, west-central, southwest, south-central, and central areas. Increasing rapidly in panhandle counties. Reported heavy in Coal County. (Okla. Coop. Sur.). TEXAS - Moderate to heavy damage to wheat and oats in Knox, Jones, and Hall Counties. Widespread and heavy on rye near Roaring Springs, Motley County, with stands up to 5 inches high destroyed. (Pallmeyer, Boring).

BEET WEBWORM (Loxostege sticticalis) - COLORADO - Larvae damaging winter wheat in Flagler area of Kit Carson County. Some controls applied. (Pilcher, Johnson).

TURF, PASTURES, RANGELAND

FALL ARMYWORM (Spodoptera frugiperda) - ALABAMA - Larvae continue to damage Coastal Bermuda and other grass hay crops in several fields in Washington and Limestone Counties. (Estes et al.). OKLAHOMA - Moderate to heavy damage to lawns and Bermuda grass pasture reported from Coal, Garvin, Cleveland, Harmon, and Ellis Counties. (Okla. Coop. Sur.). TEXAS - Medium to heavy on grass pasture near Shiner, Lavaca County. (Massey).

MONARCH BUTTERFLY (Danaus plexippus) - KANSAS - Heavy numbers observed migrating southward through eastern areas during past 2 weeks. (Simpson). OKLAHOMA - Migrating adults noted in Noble County. (Okla. Coop. Sur.).

TWO-LINED SPITTLEBUG (Prosapia bicincta) - FLORIDA - Damage moderate on 4 acres of Coastal Bermuda grass pasture at Alachua, Alachua County. (Strayer).

BANKS GRASS MITE (Oligonychus pratensis) - WASHINGTON - Heavily infested planting of Cougar bluegrass at Pullman, Whitman County. (Harwood).

FORAGE LEGUMES

ALFALFA WEEVIL (Hypera postica) - OHIO - Few eastern area alfalfa fields showing weevil damage. Adults 15 and larvae 30 per 10 sweeps and pupal cocoons 1-2 per square yard in southern Carroll County field. Feeding damage ranged 30-50 percent. Many adults will emerge from this fall generation, increasing already overabundant adult population. (Richter).

CLOVER ROOT CURCULIO (Sitona hispidulus) - WASHINGTON - Two very severe infestations on Ranger and Washoe varieties of alfalfa near Pasco, Franklin County, in south Columbia Basin region. (Purser, Harwood).

NOCTUID MOTHS - OKLAHOMA - Spodoptera frugiperda (fall armyworm) larvae moderate to heavy, damaging alfalfa in Roger Mills, Woods, Garvin, and Canadian Counties. Caused as much as 30 percent defoliation in alfalfa in Coal, Le Flore, and McCurtain Counties. Plathypena scabra (green cloverworm) larvae heavy in alfalfa in Bryan and Pontotoc Counties. (Okla. Coop. Sur.). TEXAS - S. frugiperda larvae widespread and heavy on alfalfa near Flomot, Motley County. Alfalfa reported complete loss. Heavy infestations on alfalfa in Hall County. (Boring, Pallmeyer).

ALFALFA CATERPILLAR (Colias eurytheme) - NEW MEXICO - Flights heavy in some Dona Ana County alfalfa. (N.M. Coop. Rpt.). Larvae 2-12 per 25 sweeps in alfalfa near Lovington and Hobbs, Lea County. (Mathews).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - MISSOURI - Adults ranged 3-15 (average 10) per sweep on alfalfa in southeast area. (Munson).

PEA APHID (Acyrthosiphon pisum) - NEW MEXICO - Very light on Chaves County alfalfa. (Mathews). KANSAS - Light, ranged 8-75 per 10 sweeps, in most alfalfa examined in southeast and east-central areas. Only occasional field in central district infested. (Simpson). OHIO - Decreased to 30-50 per 10 sweeps on east-central area alfalfa. (Richter).

SOYBEANS

NOCTUID MOTHS - MISSISSIPPI - Pseudoplusia includens larvae 1 per 3 row feet on late soybeans at State College, Oktibbeha County. (Sartor). OKLAHOMA - Spodoptera frugiperda (fall armyworm) larvae up to 15 per plant in soybeans in Le Flore and McCurtain Counties. Plathypena scabra (green cloverworm) moderate on soybeans in Mayes County. (Okla. Coop. Sur.). KANSAS - P. scabra larvae ranged 1-5 per 10 sweeps of soybeans, damage light to moderate, in northeast area. (Simpson).

TWO-SPOTTED SPIDER MITE (Tetranychus urticae) - SOUTH DAKOTA - Heavy on soybeans near Marion in northwestern Turner County. Several thousand per plant. (Jones, McDaniel).

PEANUTS

FALL ARMYWORM (Spodoptera frugiperda) - OKLAHOMA - Moderate to heavy defoliation in Bryan County. (Okla. Coop. Sur.).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - OKLAHOMA - Heavy in peanuts in Atoka, Pushmataha, and Bryan Counties. Occasional fields 50 percent destroyed. Moderate in Okmulgee County. (Okla. Coop. Sur.).

COTTON

BOLL WEEVIL (Anthonomus grandis) - TEXAS - Adults heavy in cotton in Foard, Wilbarger, Wichita, Hall, and Childress Counties. (Boring). ALABAMA - Adults averaged 465,000 per acre in several fields in Talladega, Shelby, and St. Clair Counties. Adults emerging from squares and from opening bolls. (Barwood et al.).

BOLLWORM (Heliothis zea) - NEW MEXICO - Generally light in cotton areas of Lea County. (Mathews). OKLAHOMA - Generally light in southwest and west-central areas except in Greer County. Damaging leaves in Mangum and Granite areas. Light in Cleveland and Marshall Counties. (Okla. Coop. Sur.). TEXAS - Larvae heavy on cotton in Hall, Cottle, Wichita, Wilbarger, and Childress Counties. (Boring).

CABBAGE LOOPER (Trichoplusia ni) - OKLAHOMA - Heavy in many southwest area fields, especially in sprayed fields. Moderate in Bryan County. (Okla. Coop. Sur.). TEXAS - Damaging in Jones and Wilbarger Counties. (Boring).

POTATOES, TOMATOES, PEPPERS

EUROPEAN CORN BORER (Ostrinia nubilalis) - MICHIGAN - Still prime factor in quality pepper production. Control excellent; best control on peppers in 10+ years. (Janes, Sept. 21).

POTATO TUBERWORM (Phthorimaea operculella) - MICHIGAN - Found in light soil and sparse growth areas of field in Monroe County. Infestation previously reported as eliminated (CEIR 19(38):739) but entire field not surveyed. Additional late season infestation in potatoes in Bay County. (Janes, Sept. 21).

GENERAL VEGETABLES

CABBAGE LOOPER (Trichoplusia ni) - NEW MEXICO - Treatments required on Dona Ana County lettuce. (N.M. Coop. Rpt.).

DETECTION

New State Records - An AMPULICID WASP (Ampulex ferruginea) FLORIDA - Flagler County (p. 765). A DERMESTID BEETLE (Dermestes frischi) OHIO - Franklin County (p. 767). A MOSQUITO (Culiseta silvestris minnesotae) MARYLAND - Queen Annes County (p. 766). ORIENTAL FRUIT MOTH (Grapholitha molesta) UTAH - Utah County (p. 765). A PHYCITID MOTH (Dasypyga alternosquamella) - UTAH - Wayne County (p. 767).

New County, Parish, and Island Records - BRAMBLEBERRY LEAFHOPPER (Macropsis fuscula) WASHINGTON - Whatcom (p. 765). BROWN RECLUSE SPIDER (Loxosceles reclusa) NEBRASKA - Keith (p. 767). A MOSQUITO (Culiseta silvestris minnesotae) MARYLAND - Kent (p. 766). A NOCTUID MOTH (Melipotis indomita) HAWAII - Maui (p. 768). SOUTHWESTERN CORN BORER (Diatraea grandiosella) ILLINOIS - Franklin (p. 762). SOYBEAN CYST NEMATODE (Heterodera glycines) LOUISIANA - Madison, Morehouse (p. 768).

DECIDUOUS FRUITS AND NUTS

ORIENTAL FRUIT MOTH (Grapholitha molesta) - UTAH - Infested peaches at Pleasant Grove, Utah County. Collected by J. Barlow August 14, 1969. Identified by D.W. Davis; verified by J. Quist. This is a new State record. Larvae general in area but absent in nearby communities. Common during 1968 in some currently infested orchards. Catch of 3 moths in Weber County in 1944-1945 only previous record in State. (Knowlton, Davis). COLORADO - Damage heavy to Elberta peaches in Vineland and Palisade districts of Mesa County during latter part of harvest. (Sisson).

PEACH TWIG BORER (Anarsia lineatella) - COLORADO - Damage heavy in peaches and moderate in some during harvest in Mesa County. (Sisson).

FALL WEBWORM (Hyphantria cunea) - NEW MEXICO - Heavy on fruit trees in Hondo Valley and on pecan trees in Dona Ana County. (N.M. Coop. Rpt.). TEXAS - Locally heavy on pecans near Thornton, Limestone County. (Brown).

WALNUT HUSK FLY (Rhagoletis completa) - OREGON - Larvae in peaches at The Dalles, Wasco County. (Thienes). CALIFORNIA - Larvae medium in English walnuts statewide. (Cal. Coop. Rpt.).

HICKORY SHUCKWORM (Laspeyresia caryana) - OKLAHOMA - Moderate to heavy in Garvin County pecans. (Okla. Coop. Sur.).

WALNUT CATERPILLAR (Datana integerrima) - ALABAMA - Many groups of larvae fed on pecan leaves in Mobile, Covington, and Lee Counties. (Vickery et al.).

TWIG GIRDLER (Oncideres cingulata) - OKLAHOMA - Adults very active on pecan and elm trees in Washita County. (Okla. Coop. Sur.).

PECAN WEEVIL (Curculio caryae) - OKLAHOMA - Moderate to heavy in Marshall and Cleveland Counties; light in Mayes County. (Okla. Coop. Sur.).

CITRUS

AN AMPULICID WASP (Ampulex ferruginea) - FLORIDA - Adults trapped by Steiner trap in tangerine tree at Bunnell, Flagler County, by J.N. Pott August 15, 1969. This is a new State record. (Fla. Coop. Sur.).

CITRUS WHITEFLY (Dialeurodes citri) - FLORIDA - Larvae and pupae heavy on 90 percent of 1,600 plants in nursery at Tampa, Hillsborough County. (Simmons).

AN ARMORED SCALE (Unaspis citri) - FLORIDA - All stages infested 10 percent of 20,000 trees in grove at Ferndale, Lake County. (Henderson, Sept. 10).

SMALL FRUITS

BRAMBLEBERRY LEAFHOPPER (Macropsis fuscula) - WASHINGTON - Light on wild Rubus spp. and commercial raspberries at Bellingham, Whatcom County, and near Sumner and Puyallup, Pierce County, during State and Federal surveys in August. Determined by J.P. Kramer. (Wash. Coop. Rpt.). Whatcom County is a new county record. (PPC).

A LEAFHOPPER (Erythroneura elegantula) - OREGON - Adults 100+ per sweep on European grape varieties at Hermiston, Umatilla County, September 15-19. Determined by P. Oman. (Every).

GRAPE PHYLLOXERA (Phylloxera vitifoliae) - OREGON - Immatures on small roots of European grape varieties at Jacksonville, Jackson County. Not collected until now although present for many years. (Larson).

FOREST AND SHADE TREES

BARK BEETLES - VIRGINIA - *Dendroctonus frontalis* (southern pine beetle) and *D. terebrans* (black turpentine beetle) activity on increase in Buckingham County. Eight active infestations involved 5-60 discolored shortleaf and Virginia pines on Buckingham-Appomattox State Forest near Holiday Lake. Elsewhere in State, *Ips* and turpentine beetles remain cause of scattered spot infestations in pine stands. Final *D. frontalis* brood due to emerge in October. Brood cause of major timber losses annually in State. (For. Pest Sur. Rpt., Aug.).

NANTUCKET PINE TIP MOTH (*Rhyacionia frustrana*) - ALABAMA - Last generation larvae heavy; killed 1-4 inches of branch tips on many 3 to 10-foot pines on lawns and isolated groups of pines on highway planting in northern area. (McQueen). VIRGINIA - Still normally high throughout Coastal Plain and Eastern Shore. (For. Pest Sur. Rpt., Aug.).

RED-HEADED PINE SAWFLY (*Neodiprion lecontei*) - VIRGINIA - Defoliated 50 percent of 3-year-old loblolly pine plantation in northern Sussex County. (For. Pest Sur. Rpt., Aug.).

AN APHID (*Eulachnus agilus*) - OHIO - Very heavy on eastern area pines. Population appears to center about Carroll, Jefferson, and Harrison Counties. (Balderston).

FALL WEBWORM (*Hyphantria cunea*) - NEW MEXICO - Heavy on Dona Ana County shade trees. (N.M. Coop. Rpt.). VIRGINIA - Second generation more evident than first. On sourwood and persimmon throughout Brunswick County. Defoliation 10 percent on 4 Powhatan County oaks and on variety of trees in several locations in Loudoun County. Widely distributed with light defoliation in southwestern Lunenburg County. Webs numerous on Grayson County hardwoods. (For. Pest Sur. Rpt., Aug.).

CHRYSOMELID BEETLES - CALIFORNIA - *Pyrrhalta luteola* (elm leaf beetle) larvae, pupae, and adults heavy on elms in various locations at Sacramento, Sacramento County. (Cal. Coop. Rpt.). OKLAHOMA - *Calligrapha scalaris* (elm calligrapha) heavy on American elm at Wynnewood, Garvin County. (Okla. Coop. Sur.).

MAN AND ANIMALS

SCREW-WORM (*Cochliomyia hominivorax*) - Total of 3 cases reported in U.S. September 21-27, as follows: TEXAS - Jeff Davis and Hudspeth; CALIFORNIA - San Diego. Total of 237 laboratory-confirmed cases reported in portion of Barrier Zone in Republic of Mexico September 14-20 as follows: Sonora 89, Chihuahua 139, Coahuila 7, Nuevo Leon 2. Total of 18 cases reported in Mexico south of Barrier Zone. Barrier Zone is area where eradication operation underway to prevent establishment of self-sustaining population in U.S. Sterile screw-worm flies released: Texas 8,818,000; New Mexico 420,000; Mexico 102,450,000. (Anim. Health Div.).

HORN FLY (*Haematobia irritans*) - MISSOURI - Averages of 337.5 and 503.3 per cow on two 10-cow herds in central area. (Thomas). OKLAHOMA - Ranged 800-1,000 per head in Tillman County and 500-700 per head in Payne County. Heavy in Cherokee and Garvin Counties. (Okla. Coop. Sur.).

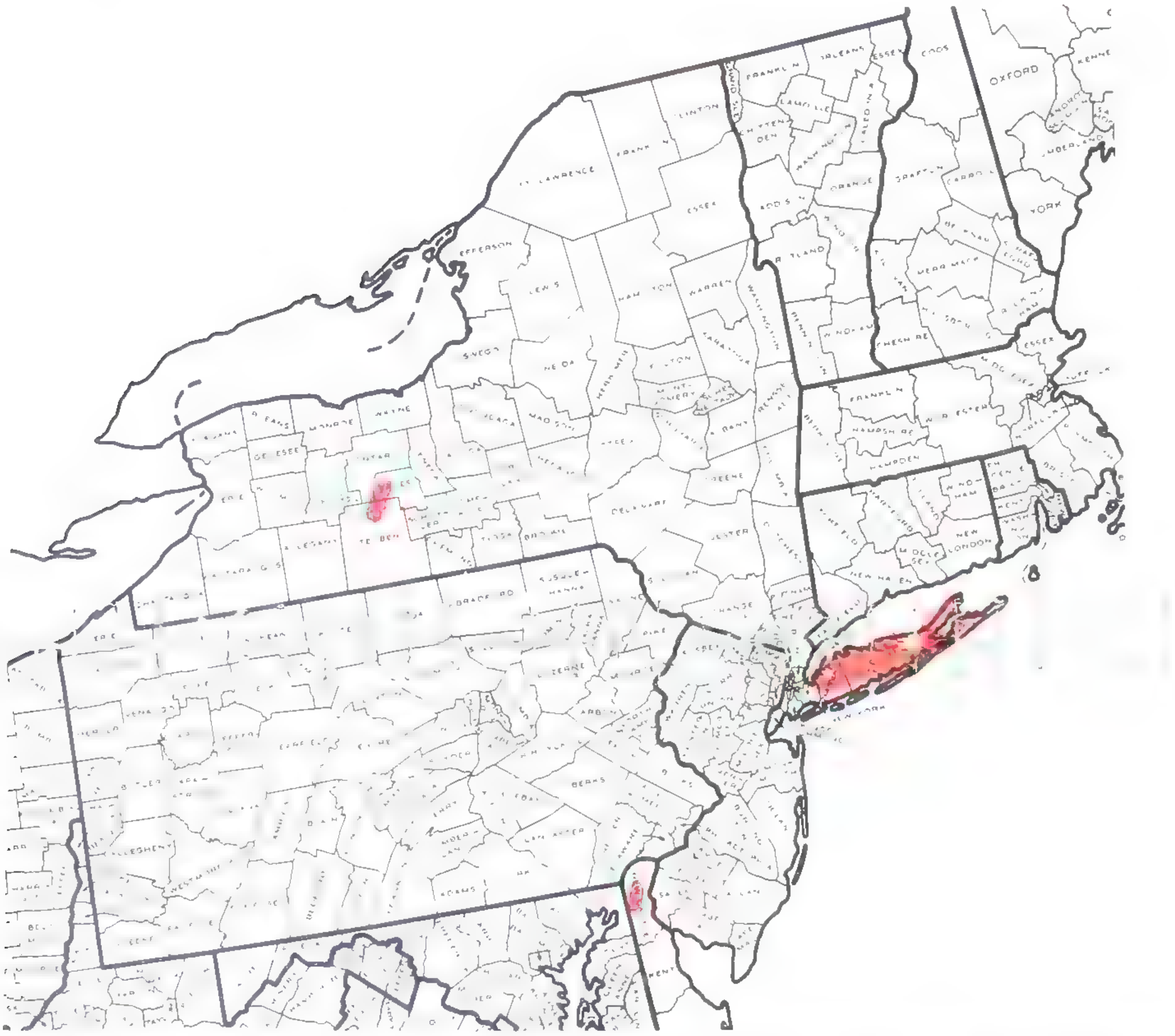
STABLE FLY (*Stomoxys calcitrans*) - WISCONSIN - Still numerous and bothersome in most areas, but cool weather moderated effect on cattle. (Wis. Ins. Sur.).

MOSQUITOES - MARYLAND - *Culiseta silvestris minnesotae* near Grasonville, Queen Annes County, for a new State record. At Rock Hall, Kent County, for a new county record. Both collected from light traps by S. Joseph and R. Berry September 14, 1967. Determined by A. Stone. (U. Md., Ent. Dept.). TEXAS - *Aedes sollicitans* light at Port Arthur; very few in rest of Jefferson County during August. *A. taeniorhynchus* at Port Arthur only. *Culex salinarius* heavy throughout southern half of county. *C. pipiens quinquefasciatus* light throughout county. *Psorophora confinnis* most numerous at north Beaumont, with a large flight in midcounty;

GOLDEN NEMATODE

COOPERATIVE FEDERAL / STATE QUARANTINES

COUNTIES ENTIRELY COLORED ARE COMPLETELY REGULATED;
COUNTIES PARTIALLY COLORED ARE PARTIALLY REGULATED



RESTRICTIONS ARE IMPOSED ON THE MOVEMENT OF REGULATED ARTICLES FROM RED INTO OR THROUGH WHITE

CONSULT YOUR STATE OR FEDERAL PLANT PEST CONTROL INSPECTOR OR YOUR COUNTY AGENT FOR ASSISTANCE REGARDING EXACT AREAS UNDER REGULATION AND REQUIREMENTS FOR MOVING REGULATED ARTICLES.

U. S. Department of Agriculture
Agricultural Research Service
Plant Pest Control Division
Cooperating with Affected States

SEE REVERSE SIDE FOR INFORMATION CONCERNING CERTIFICATION OF REGULATED ARTICLES.

Revised September 2, 1969

THE FOLLOWING CROPS OR ARTICLES MUST BE MOVED UNDER CERTIFICATE OR PERMIT YEAR-ROUND EXCEPT AS INDICATED:

1. Soil, compost, humus, muck, peat, and decomposed manure, separately or with other things.

   Soil samples of any size shipped to U.S. Army Corps of Engineers soil laboratories within the conterminous United States are exempt.

2. Plants with roots, except soil-free aquatic plants.

3. Grass sod.

4. Plant crowns and roots for propagation.

5. True bulbs, corms, rhizomes, and tubers, of ornamental plants.

6. Irish potatoes and other root crops.

   Irish potatoes (other than for seed) are exempt* if graded at an approved grader or washed free of soil, and packaged in approved containers. Provided; however, potatoes from noninfested fields may be shipped to Puerto Rico in new burlap bags.**

   Root crops (other than Irish potatoes and sugar beets) are exempt* if moved in approved containers.**

7. Small grains and soybeans.

   Small grains are exempt* if harvested in bulk or directly into approved containers,and if the small grains and containers thereof have not come into contact with the soil; or, if they have been cleaned to meet State seed sales requirements.

   Soybeans (other than for seed) are exempt* if harvested in bulk or directly into approved containers, and if the soybeans and containers thereof have not come into contact with the soil.

8. Hay, straw, fodder, and plant litter of any kind.

   Hay, straw, fodder, and plant litter are exempt* if moved in approved containers.**

9. Ear corn except, shucked ear corn.

   Unshucked ear corn is exempt* if harvested in bulk or directly into approved containers, and if the corn and containers thereof have not come into contact with the soil.

10. Used crates, boxes, and burlap bags, and other used farm products containers.

11. Used farm tools.

    Used farm tools, are exempt* if cleaned free of soil.

12. Used mechanized cultivating and used harvesting machinery.

13. Used mechanized soil-moving equipment.

14. Any other products, articles, or means of conveyance, of any character whatsoever, not covered by the above when it is determined by an inspector that they present a hazard of spread of golden nematode and the person in possession thereof has been so notified.

*Exempt if not exposed to infestation after cleaning or other prescribed handling.

**Exempt if handled as specified above, until the person in possession thereof has been notified by an inspector by written notification that a hazard of spread of the golden nematode exist.

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adults at Sabine Pass. Anopheles crucians occurred throughout county. A. quadrimaculatus at north Beaumont only. Uranotaenia spp. peaked, 84 per night in Port Arthur light trap; mostly U. lowii, rest U. sapphirina. Coquillettidia perturbans returned to Port Arthur area. Apparently second brood emerging. North Beaumont light trap shows significant increase over 1968; other areas about same. No excessive landing rates during August. (Jefferson County Mosq. Cont. Dist.).

A NOSE BOT FLY (Cephenemyia jellisoni) - OKLAHOMA - Fully grown larvae emerged from deer checked in Cherokee County. (Okla. Coop. Sur.).

EAR TICK (Otobius megnini) - OKLAHOMA - Averaged 6 per ear on cattle checked in Sequoyah and Cherokee Counties. (Okla. Coop. Sur.).

WINTER TICK (Dermacentor albipictus) - OKLAHOMA - Larvae and nymphs light on horses and cattle checked in Murray County. (Okla. Coop. Sur.).

BROWN RECLUSE SPIDER (Loxosceles reclusa) - NEBRASKA - Specimen in home at Ogallala, Keith County, for a new county record. (James, Keith).

MISCELLANEOUS WILD PLANTS

A PHYCITID MOTH (Dasypyga alternosquamella) - UTAH - Larvae infested mistletoe on ponderosa pine in Dixie National Forest at Teasdale, Wayne County. Collected by J.H. Judd September 3, 1969. Determined by D.M. Weisman. This is a new State record. (Knowlton).

STORED PRODUCTS

A DERMESTID BEETLE (Dermestes frischi) - OHIO - Adults and larvae feeding on bird feathers in Botany and Zoology Building at Ohio State University, Franklin County. Determined by C.A. Triplehorn. This is a new State record. (Richter).

CIGARETTE BEETLE (Lasioderma serricorne) - WEST VIRGINIA - Light to moderate in stored chewing tobacco. Adults 10-15 per package in Kanawha County. (Cole, Sept. 17).

INDIAN-MEAL MOTH (Plodia interpunctella) - IOWA - Larvae heavy, 10-15 per square foot, on surface of shelled corn in Story County. Sprayed September 1. (Iowa Ins. Sur.). OHIO - Infestation found in grain storage area in Van Wert County. (Richter).

FEDERAL AND STATE PLANT PROTECTION PROGRAMS

GRASSHOPPERS - NEBRASKA - Ranged 6-15 per square yard on margins of 11 wheatfields in Saunders, Gage, Jefferson, Lancaster, and Saline Counties; mostly Melanoplus differentialis, M. femurrubrum, M. bivittatus, and Arphia spp. (Andersen, Lipsey). OREGON - M. sanguinipes 10+ per square yard, infested about 1,000 acres of young coniferous trees in Applegate District, Rogue River National Forest, Jackson County. Some band wing grasshoppers may also be damaging these trees. (Berry).

ORIENTAL FRUIT FLY (Dacus dorsalis) - CALIFORNIA - To September 26 total of 15 males recovered in traps in limited area at El Monte, Los Angeles County. (Cal. Coop. Rpt.).

PINK BOLLWORM (Pectinophora gossypiella) - CALIFORNIA - State applied carbamate to infested field in Panama area of Kern County. No additional native moths caught September 22-26. Trap density now one trap per 20 acres in 100,000 acres in lower San Joaquin Valley. Sterile releases: Kern County 492,400; Borrego 160,500. (PPC). NEVADA - Hexalure traps caught 95 native and 16 sterile males September 20 and 23 in Moapa Valley, Clark County. Larva in blossom September 23. Hexalure trap caught 17 males September 24 in Pahrump Valley, Nye County. (Nev. Coop. Rpt.). NEW MEXICO - Up to 84 percent of bolls checked in southern Eddy County had larvae. (Mathews). Live larvae infested 12-68 percent of bolls in 4 fields sampled in extreme southern Dona Ana County. Adult activity increased. (Campbell). TEXAS - Blacklight trap caught 3,804 September 20-26 at Waco, McLennan County. (Ent. Res. Div.).

SOYBEAN CYST NEMATODE (*Heterodera glycines*) - LOUISIANA - Light in soybean field at Tallulah, Madison Parish, and medium at Oak Ridge, Morehouse Parish, for new parish records. Collected by G.L. Forcht September 10 and 11 respectively. Determined by V.H. Owens; confirmed by A.M. Golden. (PPC).

HAWAII INSECT REPORT

Corn - CORN PLANTHOPPER (*Peregrinus maidis*) adults heavy in 5 acres of seed corn at Kaunakakai, Molokai. (Fujimoto). All stages of TUMID SPIDER MITE (*Tetranychus tumidus*) and CORN EARWORM (*Heliothis zea*) severe in 3 acres of ripe sweet corn at Waianae, Oahu. Mites causing rusty appearance on undersurface of leaves of many plants. (Kawamura).

General Vegetables - All stages of TARO LEAFHOPPER (*Tarophagus proserpina*) and WATERLILY APHID (*Rhopalosiphum nymphaeae*) abundant in 3 acres of taro at Waimea Valley, Kauai. Lady beetle larvae and pupae light. (Sugawa, Ikehara). All stages of SWEETPOTATO WEEVIL (*Cylas formicarius elegantulus*) and SWEETPOTATO VINE BORER (*Omphisa anastomosalis*) heavy in 0.25 acre of ready-to-harvest sweetpotatoes at Haiku, Maui. Damaged 75 percent of mature stems and 5 percent of tubers. (Miyahira). All stages of BEAN FLY (*Melanagromyza phaseoli*) heavy in unsprayed backyard plantings of *Phaseolus* spp. at Nanakuli, Oahu, and in small snap bean planting at Haiku where all ground level stems infested. (Miyahira). GREENHOUSE WHITEFLY (*Trialeurodes vaporariorum*) heavy to severe in 0.25 acre of eggplant and cucumber at Koko Head, Oahu. (Funasaki).

Fruits and Nuts - COCONUT LEAF ROLLER (*Hedylepta blackburni*) damaged 20-50 percent of fronds on all coconut trees at Barbers Point in Ewa, Oahu. Only pinnae midribs remaining on many older fronds. (Olson). All stages of COCONUT SCALE (*Aspidiotus destructor*) moderate on few leaves of avocado and heavy on mountain-apple (*Eugenia malaccensis*); trace to light on previously uninfested coconut trees at Kaneohe, Oahu. Trace on banana and 2 coconut trees at Barbers Point. (Olson, Funasaki).

Miscellaneous Insects - A GRASSHOPPER (*Oedaleus abruptus*) adult collected at Barbers Point, about 6 miles from Hickam Air Force Base for second specimen outside of base. Collected in dry grassy area, similar to terrain of original focal point. (Olson).

Forest and Shade Trees - Adult of a NOCTUID MOTH (*Melipotis indomita*) caught at Waihee, Maui, for a new island record. Previously found only on Oahu, Kauai, and Molokai Islands. (Ah Sam).

CORRECTIONS

CEIR 19(30):584, 585; 19(33):652; 19(34):671 - A NOCTUID MOTH (*Melipotis ochrodes*) in Hawaii should read A NOCTUID MOTH (*Melipotis indomita*). (Hawaii Ins. Rpt.).

LIGHT TRAP COLLECTIONS

	Temperature °F.	Precipitation (inches)	Type of trap BL = blacklight I = incandescent MV = mercury vapor O = other	Agrotis ipsilon (black cutworm)	Carpocapsa pomonella (codling moth)	Chorizagrotis auxiliaris (army cutworm)	Estigmene acrea (salt-marsh caterpillar)	Faronta diffusa (wheat head armyworm)	Feltia subterranea (granulate cutworm)	Heliothis virescens (tobacco budworm)	H. zea (bollworm, corn earworm, tomato fruitworm)	Loxostege commixtalis (alfalfa webworm)	Loxostege similalis (garden webworm)	Loxostege sticticalis (beet webworm)	Manduca quinquemaculata (tomato hornworm)	Manduca sexta (tobacco hornworm)	Ostrinia nubilalis (European corn borer)	Peridroma saucia (variegated cutworm)	Prodenia ornithogalli (yellow-striped armyworm)	Pseudaletia unipuncta (armyworm)	Spodoptera exigua (beet armyworm)	Spodoptera frugiperda (fall armyworm)	Trichoplusia ni (cabbage looper)	Crops
FLORIDA																								
Gainesville 9/20-25			BL	1			2		18	1	3				1				8		20	19		
KANSAS																								
Colby 9/22, 24			BL	2		4					3									2				
MISSISSIPPI																								
Stoneville 9/20-26	54-85	trace	2BL	48			67		37	56	1429				2				88	78	1959	201	52	
NEW JERSEY																								
Cedarville 9/19-21			BL	2							11							2	2	32		1		
Halltown 9/19-21			BL	2							13								2	2		2	4	
TEXAS																								
Waco 9/20-26			BL						77	24	224							71	145	1311	582	199	178	
WISCONSIN																								
Hancock 9/16-24			BL	1							1							2		27		19		
Madison 9/18-26			BL	7							1							5		28		14		

KHAPRA BEETLE
(*Trogoderma granarium* Everts)

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Prepared in Plant Pest
Control Division

U.S. Dept. Agr.
Coop. Econ. Ins. Rpt.
19(40):770, 1969

BOLL WEEVIL
(*Anthonomus grandis* Boh.)

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Prepared in Plant Pest
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